

01/12/2004 10:00 +44-1962-818927

IBM UKIPLAN

PAGE 14/14

**EUROPEAN PATENT OFFICE****Patent Abstracts of Japan**

PUBLICATION NUMBER : 2000208620  
PUBLICATION DATE : 28-07-00

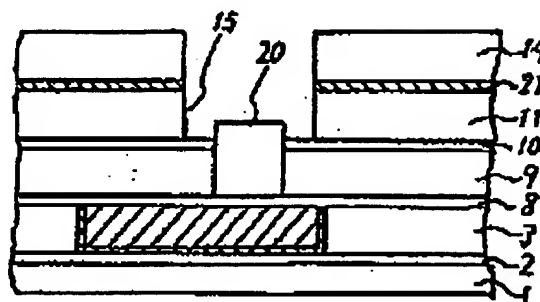
APPLICATION DATE : 11-01-99  
APPLICATION NUMBER : 11004464

APPLICANT : MITSUBISHI ELECTRIC CORP.

INVENTOR : MORIMOTO NOBORU;

INT.CL. : H01L 21/768 H01L 21/3205

TITLE : PRODUCTION OF SEMICONDUCTOR  
DEVICE



**ABSTRACT :** **PROBLEM TO BE SOLVED:** To form satisfactory Cu wiring with high reproducibility, while using a dual damascene process.

**SOLUTION:** A hole for connection hole is formed by etching through a second wiring correspondent inter-layer insulating film 11, a second wiring stopper film 10 and a wiring inter-layer insulating film 9. The entire surface is coated with an organic coating film 20, such as resist by rotary coating and inside the hole for connection hole, the organic coating film 20 is left by a method such as full etch back, so that the surface of the organic coating film 20 can be higher than the lower surface of the second wiring correspondent inter-layer insulating film. Afterwards, an antireflection film 21 is formed over the entire surface about from 500 to 1,000 angstroms, and a groove 15 for second wiring layer is formed by etching the second wiring corresponding inter-layer insulating film 11.

COPYRIGHT: (C)2000,JPO